



King's Research Portal

DOI:

[10.1177/1477370819850124](https://doi.org/10.1177/1477370819850124)

Document Version

Peer reviewed version

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Jordanoska, A., & Lord, N. (2020). Scripting the mechanics of the benchmark manipulation corporate scandals: The 'guardian' paradox. *European Journal of Criminology*, 17(1), 9-30.
<https://doi.org/10.1177/1477370819850124>

Citing this paper

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

General rights

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Research Portal

Take down policy

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Aleksandra Jordanoska
Dickson Poon School of Law, King's College London
aleksandra.jordanoska@kcl.ac.uk

Nicholas Lord
School of Law, University of Manchester
nicholas.lord@manchester.ac.uk

Scripting the Mechanics of the Benchmark Manipulation Corporate Scandals:
The “Guardian” Paradox

This article implements a crime script analysis to understand the procedural dynamics of corporate benchmark-rigging in the financial services industry. In 2012 several global banks were implicated in the manipulation of various trading benchmarks, portraying the industry as affected by serious, pervasive and ‘organised’ corporate crimes. Yet their dynamics have been relatively little studied by criminologists. To address this gap, we analyse official enforcement documentation, supplemented with data from interviews with key informants in the UK financial markets. We analyse the range of interactions between the relevant actors, their actions and the resources essential to the manipulations, and deconstruct the benchmark manipulations into four scenes (calculated positioning and identification of co-collaborators – recruitment - (ephemeral) manipulation - recompense and solicitation). The analysis reveals that regulatory and organisational systems play a paradoxical role of both ‘capable guardians’ and ‘facilitators of misconduct’; this has implications for criminological theory.

Keywords: corporate crime; financial markets; market manipulation; script analysis; capable guardianship.

Introduction

This article implements a crime script analysis to understand the procedural dynamics of corporate benchmark-rigging and market manipulation in the financial services industry, and their interrelations to regulatory and organisational conditions. Despite increased scrutiny of the financial markets following the global financial crisis and the mobilisation of law enforcement efforts, scandals such as the rigging of the LIBOR (London InterBank Offered Rate) (Wheatley, 2012) and Forex (foreign exchange) (Tillman et al., 2018) trading benchmarks by global investment banks indicate that the financial services industry was still affected by serious, pervasive and networked corporate crimes. The LIBOR came under public scrutiny during the height of the financial crisis with allegations that banks had deliberately misstated their LIBOR submissions to project financial soundness during market turbulence (Hou & Skeie, 2013). The ensuing investigations revealed that the manipulations had preceded the crisis, and uncovered a range of rigging activities undertaken by multiple, systemically important, participants in the financial markets.

These benchmark-rigging offences caused significant and, as of yet, not fully calculated costs and harms (financial and social), yet the mechanics of such manipulations have been relatively little studied by criminologists. We address this gap with a detailed and systematic analysis of the nature, organisation and facilitative conditions of the LIBOR scandal to provide insight into how these behaviours and conditions were able to take place.ⁱ We analyse official enforcement documentation alongside supplementary information from interviews with key informants in the UK financial services industry (former regulators, regulatory and white-collar crime lawyers). Drawing on these data, we examine the range of interactions between the relevant actors, their actions and the resources essential to the manipulations.

First, we discuss the functioning of the LIBOR and how it was fixed. Second, we outline our theoretical framing before expanding on our method and modified ‘script’ analytical approach. Third, we map out the organisation of the network of actors and their roles as well as the associated ‘scripts’ of the manipulation process. Our analysis deconstructs the benchmark manipulations into four scenes (calculated positioning and identification of co-collaborators – recruitment - (ephemeral) manipulation - recompense and solicitation) underpinned by four core processes (communication, collaboration, transaction, interpretation). The analysis reveals that regulatory and organisational systems and requirements play a paradoxical role of both ‘capable guardians’ and ‘facilitators of misconduct’; this has implications for criminological theory.

Unpacking the benchmarks: the functioning and fixing of the LIBOR

The LIBOR is a benchmark rate, or rather a set of rates, that indicates how much interest would be paid by large banks when they borrow short-term funds from other banks on the money markets, for a given period, in a given currency. At the time of the financial crisis LIBOR was the most closely-watched number on the planet as it serves two crucial functions in the financial markets: 1. it is a reference rate for a range of financial contracts, and 2. it is an indicator of the financial ‘health’ of systemically important banks (Koblenz et al., 2013; Hou & Skeie, 2014). First, as a reference rate, LIBOR is used in many financial contracts, including various retail loan and mortgage agreements, and importantly for the benchmarks manipulation, as the basis of a range of derivatives contracts (contracts whose value depends on the movement of another underlining asset (Koblenz et al., 2013)). Official estimates of the notional value of contracts linked to LIBOR total at least \$300 trillion (informally, all the way up to \$800 trillion (Wheatley, 2012)). Thus, LIBOR is of great economic significance and its manipulation is harmful to society in the aggregate (including legitimacy and ‘market fairness’) and to

individual investors and savers. Second, as a health indicator, LIBOR is connected to the liquidity and prudential health of a bank: if a bank is doing poorly, its costs of borrowing money from other banks increase – so does its LIBOR submission.

For such an important benchmark, the ‘facts’ of LIBOR’s construction could hardly have been more mundane (MacKenzie, 2008). LIBOR rates were calculated daily on the basis of submissions from a number of banks that participated on a LIBOR submissions panel (Panel Banks) and their perceptions of what their borrowing interest rates should be. The composition of the panel varies as LIBOR can be fixed with regard to a set of ten different currencies (including US Dollar, Sterling, Yen, Swiss Franc), and not all banks contribute to all of them. LIBOR was calculated as an average number out of the Panel Banks’ submissions with the highest and lowest submissions discarded. This meant that if one bank would have a much higher or lower LIBOR submission, it would be discarded from the calculation of the average, but it would also bring the overall average higher or lower. These movements upward and downward represented the core activity on which the involved individuals across the offending banks focused to achieve their illegal profits (see below). To prevent unfounded mirroring of other Panel Banks’ submissions, the rules on setting LIBOR stipulated that a bank could not see other contributors’ rates during the submission window - this was only possible after the publication of the final LIBOR rate. However, other controls were largely absent as the process was facilitated by the British Bankers Association and Thompson Reuters, representing a case of self-regulation (Baldwin et al., 2012). It left significant discretion to the Panel Banks as to the assessment of their own borrowing costs.

Theoretical and conceptual framing: script analysis, its uses and limitations

The rigging of the LIBOR is intrinsically a form of market manipulation. Market manipulation involves misrepresentations, false statements, artificial transactions or trading schemes, that influence participants in financial markets to engage in trading or exercising rights related to financial investments, enabling the perpetrators to achieve financial gains that would not be possible in the absence of such deceptive practices (Avgouleas, 2015: 13-14). Understanding the nature and organisation of the mechanics and conditions of such manipulation is important to develop a fuller explanatory account of these transgressions; this has both scientific and policy implications.

Criminological theory provides a set of concepts and approaches for analysing the ‘how’ (i.e. *modus operandi*) of crime. For instance, routine activity theories shift attention to the circumstances and situations of criminal acts, foregrounding the necessary convergence at the micro-level of likely offenders, suitable targets and the absence of capable guardians and analysing how social structure and patterns of social activities produce these convergences (Cohen and Felson, 1979; Felson and Eckert, 2018). Originating from these traditions of the routine activities approach and its integration with rational choice theory, ‘crime script analysis’ is a systematic framework to map the procedural aspects and requirements of the crime commission process within specific situational contexts - the relevant scenes, actors, equipment, locations, and sequence of actions used by the offenders (Cornish, 1994a, 1994b). The scripting method draws from the concept of ‘schemata’: hypothesized knowledge structures that allow individuals to organise their understanding of events and people so that they enact commonplace behaviours or routines (Cornish 1994b). Within this framework, ‘scenes’ represent the ‘episodes or “logistical steps” that occur along the overall schema’ (Morselli and Roy, 2008: 73). Each scene has different permutations of ‘facets’ that represent the different ways of accomplishing the underlying purposive and goal-oriented behaviours.

Script analysis provides an ideal framework for understanding the *organisation* of serious crimes, the opportunities for their commission and the social relations that they imply (Edwards & Levi 2008; Edwards, 2012). Script analysis has previously been applied to different serious crime typesⁱⁱ but has not been applied to complex corporate offending, such as market manipulation.

Drawing on the concepts of routine activity theory and script analysis focuses our attention towards examining how the structured daily activities of bank actors across institutions creates opportunities for manipulation, and provides a framework for systematic empirical insights into the mechanics and organisation of such crimes in the financial services industry. However, we recognise there are theoretical limitations to the script analysis approach. The framework is primarily a micro, individual-level approach to understanding offending behaviour, underpinned by variations of rational choice theory. It can individualise offending behaviour and not sufficiently incorporate wider market drivers and conditions or foreground organisational pressures and cultures. For this reason, it may appear as a basic or an impoverished approach to explaining complex organisational offending which is often embedded in multiple levels of causal factors at the individual, organisational, and regulatory and socio-political level. In these terms, we scrutinize the applicability of script analysis to explanations of complex corporate crimes.

We argue that a focus on the specific scripts that constitute crime commission is an important micro-level dimension of offending that can offer a valuable insight into, and an explanation of, the meso-level and macro-level factors in corporate crime. We make a concerted effort to connect the procedural mechanics with relevant organisational and regulatory factors, the combination of which can be an indicator of incapable guardianship – an endeavour not previously employed in this context. Unlike the traditional focus of the ‘scripts’ literature on designing situational prevention mechanisms, we take a different

approach. We expand and refine the theoretical elements and concepts of script analysis, to theorise how scripts, as indicators of the micro-level processes of human activity (i.e. actors' routine activities), can be used in a fruitful way to understand more distal, generative and socially/culturally embedded factors and conditions (e.g. organisational environments and networked relationships) that contribute to offending, and how they interact with opportunities for market manipulation (Edwards and Levi, 2008: 363). In this, we align with integrated theories on the causation of corporate crime (e.g. Coleman, 1987; Vaughan, 1998), but we use micro-level insights to theorise the role of macro-level factors. Our original contribution is to theorise the relevant guardians in this context and highlight their paradoxical role.

Methodology and Data

The research was guided by the following three questions:

1. What were the procedural aspects of the benchmarks manipulation and what were the organisational dynamics of these processes in different 'scenes'?
2. Which actors (individual and corporate) were central to the manipulation and how did they cooperate across the manipulation 'script' within their occupational roles?
3. In what ways did regulatory and organisational conditions, with a focus on supervision and capable guardianship, create opportunities and potential for manipulation?

The data are drawn from (i) enforcement decisions by a range of social control agencies around the world that undertook criminal/regulatory actions (Table 1), and (ii) nine qualitative semi-structured interviews with former regulators, regulatory and white-collar crime lawyers on the

UK enforcement process. All data were analysed in NVivo using qualitative content analysis and thematic analysis.

Corporation	Regulatory enforcement decisions			Criminal justice actions	
	UK (FCA)	US (CFTC)	EU Commission	UK (SFO)	US (DoJ)
Deutsche Bank	£227m	\$1.4b ⁱⁱⁱ	€725m	1 convicted individual	DPA, \$775m
	3 individuals prohibited				2 convicted individuals
UBS	£160m 1 individual prohibited	\$700m	0 under the leniency scheme	1 convicted individual	UBS AG NPA, \$400m UBS Japan guilty plea, \$100m
Rabobank	£105m	\$475m	X	X	DPA, \$325m
					1 guilty plea
RBS	£87m	\$325m	€391m	X	RBS Plc DPA, \$100m RBS Japan guilty plea, \$50m
Barclays	£59m	\$200m	0 under the leniency scheme	7 convicted individuals	NPA, \$160m
	2 individuals prohibited				NPAs with 2 individuals
Lloyds	£50m	\$105m	X	X	DPA, \$86m
CitiGroup	X	\$175m	€70m	X	X
Société Générale	X	\$475m	€227m	X	DPA, \$275m
JP Morgan	X	X	€79m	X	X
ICAP	£14m	\$65m	€14m	X	X
Martin Brokers	£630.00	\$1.2m	€ 247.00	X	X
	2 individuals fined and prohibited				

Table 1

UK, US and EU regulatory and criminal justice responses to the benchmarks-rigging

The official documents offered a wealth of information on the actors, the particularities of the mechanics of the rigging and insights into the facilitative role of the regulators. The sample consists of all published enforcement decisions on the benchmark rigging, including enforcement decisions by regulatory *and* criminal justice bodies.^{iv} The richest data came from regulatory enforcement decisions by the UK financial regulator, the Financial Conduct Authority (and its predecessor, the Financial Services Authority), and the US Commodities and Futures Trading Commission, and from non-prosecution (NPA) and deferred prosecution agreements (DPA) by the US Department of Justice (DoJ). As with archival court data (Chiu et al., 2011), regulatory enforcement decisions are based on evidence deemed to be true by a public agency, have undergone stringent legal scrutiny and are based on multiple sources of evidence such as offender statements, forensic evidence and witness statements. We recognise the limitations of relying on official documentation (i.e. the data are an artefact of the enforcement response and organisational agendas/priorities; certain actors may be marginalised or hidden) but this is a feature of investigation into all open systems and we draw on our interview data for a deeper understanding of the investigative procedures and the potential biases in the case construction.

The argument for drawing on both criminal and regulatory data is both semantic and technical. In technical terms, the manipulations received differential legal treatment across different jurisdictions despite the misconduct being qualitatively the same (Interview A, 2013). Notably, the US law enforcement agencies adopted a criminal response towards both institutions and individuals, whereas, the UK focused solely on criminally prosecuting individual traders but not their institutions. The analysis of the decisions shows that they tackle broadly the same offending behaviours and offer a wealth of information regardless of the social control response. But this also has semantic importance as there is a long tradition in the white-collar crime literature recognising the need to look beyond the nature of social control

and into the essence of behaviours and their harms, given enduring power biases in processes of criminalisation (Sutherland, 1983; Braithwaite, 1984; Slapper & Tombs, 1999). Thus, we approach the LIBOR manipulation from the perspective of ‘corporate *crime*’, defined as ‘a conduct of (1) a corporation, or (2) employees acting on behalf of a corporation, which is proscribed by law’ (Braithwaite, 1984: 6). This captures non-criminal yet harmful organisational offending and incorporates criminal and regulatory violations.

Scripting the Benchmark Manipulations: Networks, Scenes and Processes

In this section we analyse key aspects of the benchmark manipulation scripts. First, we identify the networks of actors at the centre of the manipulation and scrutinise their roles, the currencies of their manipulations and their spatial separation. Second, we examine the behaviours of these actors within the ‘scenes’ and the underlying processes of the manipulation.

I. The social network: actors, roles and currencies

In establishing the social network of the benchmark manipulation, it is crucial to distinguish between two types of actors: the corporations and the individuals within them. The manipulation of the LIBOR benchmarks involved two types of corporate actors: Panel Banks and Interdealer Brokers. Interdealer Brokers are financial institutions that facilitate derivatives trades for institutional clients such as Panel Banks. Within the corporate actors, the relevant individual roles included Derivatives Traders, Trader-submitters, and Submitters within the involved Panel Banks, and Brokers within the Interdealer Brokers. The Derivatives Traders managed portfolios of, and invested into, interest rate derivative contracts tied to the movement of different LIBOR benchmarks on behalf of their Banks. Profit was achieved when the contracts would correctly predict where LIBOR in a particular currency would be set at a

particular future point in time. If the Traders were accurate in their bets, the return for the Bank was significant (around \$1m per contract), attracting also personal benefits for the Trader for good performance, though other investors with contracts related to LIBOR might have suffered losses (Ashton & Cristophers, 2015; Tillman et al., 2018). The Submitters were entrusted with calculating and submitting the LIBOR on behalf of their Banks, in theory, on the basis of objective financial indicators, such as the number of transactions the Bank made in particular currencies (Hall, 2013). The Traders-submitters had a dual role of trading in derivatives contracts and acting as LIBOR setters.

The interactions in the rigging scandals involved a large number of individuals – on average, between 20 to 30 individuals were involved in the manipulative activities within an individual bank, either as direct colluders or as poor guardians. These individuals did not participate in all of the rigging activities at all times. However, in some of the scenes they communicated to individuals external to their institution, hence, the number of actors involved at certain points in time was again around 30. Table 2 shows that most of the Panel Banks were involved in the manipulation of multiple benchmarks, conducted by different trading desks within the organisation. The sample analysis shows that the most frequently manipulated benchmarks were the Yen, US Dollar, Sterling and Swiss Franc LIBOR, and EURIBOR. The focus on these should be interpreted as opportunity-driven (Benson & Simpson, 2015); they represented the basis of a significant number of derivatives contracts.

		Benchmarks					Locations of the actors involved								
		Yen LIBOR	US Dollar LIBOR	EURIBOR	British Sterling LIBOR	Swiss Frank LIBOR	London	Tokyo	New York	Singapore	Connecticut	Frankfurt	Paris	Utrecht	Zurich
Panel banks	Barclays	X	X	X	X		X	X	X	X					
	Deutsche Bank	X	X	X	X	X	X		X			X			
	Rabobank	X	X	X	X		X	X		X				X	
	RBS	X		X		X	X	X	X	X	X				
	UBS	X	X			X	X	X		X	X				X
	Lloyds	X	X		X		X								
	CitiGroup	X						X							
	Societe General			X									X		
	JP Morgan	X					X		X						
Interbroker dealers	ICAP	X					X								
	Martin Brokers	X					X								

Table 2

Corporations, benchmarks and locations of the actors involved

The period of transgressions within one corporate actor spanned an average of five years, with the longest periods of over six years at Deutsche Bank, RBS, Société Générale and UBS and the shortest of 1.5 years at JPMorgan. Geographically, the violations involved offices located primarily in London, Tokyo and New York – the biggest stock exchanges in the world, and also where the LIBOR benchmarks were predominately set. Other ‘hot spots’ were Singapore and Connecticut, and the cities of the headquarters of some of the involved global banks: Frankfurt, Utrecht, Paris and Zurich. This distribution fully reflects the global and interconnected nature of financial markets, posing special difficulties in their governance (Knorr Cetina and Bruegger, 2002).

II. Necessary Scenes and Processes

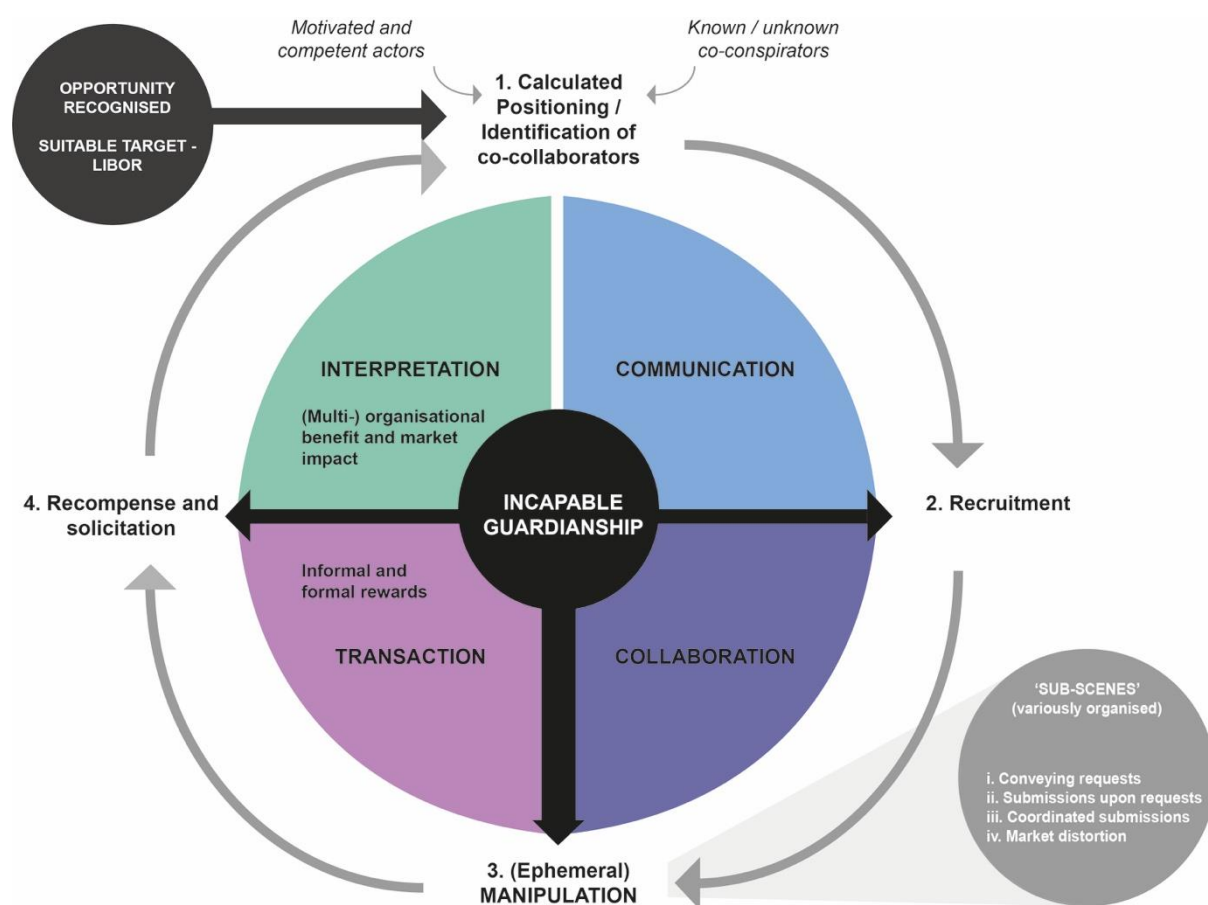
Prior to undertaking the script analysis, it was assumed that the primary, instigating actors involved in the manipulation had recognised a particular situation as an opportunity for profit generation. Opportunities do not mean that manipulation will occur; an opportunity is a necessary but not a sufficient condition. Thus, we also assumed that those actors were sufficiently (and variously) motivated to pursue these opportunities and felt they possessed the relevant skill-set, expertise and knowledge to realise them and to circumvent regulation or guardianship (if these were in place at all). In all cases, opportunities to manipulate were seen as propitious due to lucrative motives based on realising the derivatives contracts tied to the movement of the benchmarks: profitability for the Banks and Interdealer Brokers, personal bonuses and status for the Traders, and rewards for the Brokers. In this sense, this organisational offending benefited both the corporation and its individuals.

We analysed the required actions and processes that occurred before, during and after manipulations of the benchmarks (Cornish, 1994b) and identified that the manipulation consisted of a range of activities, with differing levels of complexity and extent of actors involved. The four key scenes of the manipulation script encompass the full extent of activities necessary for the most complex manipulation schemes:

1. Calculated Positioning and Identification of Co-Collaborators;
2. Recruitment;
3. (Ephemeral) Manipulation (with alternative sub-scenes);
4. Recompense and Solicitation.

These scenes are not necessarily, but often were, linear. For instance, recruitment for the

collaboration may have reflected already existing, well-established networks, or more ephemeral and responsive connections between willing actors. The complexity of the corporate misconduct reveals that all of these scenes were not present in all of the manipulative activities, and variations also existed as highlighted by the sub-scenes. Thus, we present them at a universal, meta-script level, recognising that different ‘tracks’, or ways of organising the manipulations, exist within each scene (see Leclerc et al, 2011), with the particular permutation of behaviours reflecting those different contextual drivers (e.g. the network, locations, currencies etc.). That is, the manipulations of the benchmark rates were organised in different ways with variations in actors and behaviours across the core scenes and we analyse these specific permutations to substantiate our general scripts. Connecting each scene are underlying processes related to the manipulation: Communication; Collaboration; Transaction; Interpretation. These scenes and processes are visualised in Figure 1.



Scene 1: Calculated Positioning and Identification of Co-Collaborators

White-collar crimes are always embedded within legitimate activities, in fact, their commission depends on access to legitimate occupations that provide trust (Shapiro, 1990) and a “cloak” of legitimacy (Clarke, 1990). It is therefore not surprising that the initial scene contains activities that formed part of the actors’ daily profession: the opening of trading positions in derivatives tied to the movement of LIBOR currencies, and research into the effects of their movement upon existing positions. Predictions, assessments and hedging of risks are common aspects of trading in financial instruments, thus, prediction and assessment of the effects of LIBOR movements in a particular direction was a legitimate, routine activity. It was also a necessary precursor to the manipulation activities as it enabled the traders to *calculate* the movement that would lead to increasing the profit on the derivatives trading or minimise the losses. In this way the preparation for the crime commission became normalised as a regular aspect of the traders’ job. The small number of Panel Banks - a legacy of the growing concentration of the money markets in previous decades, meant that the “guesses were straightforward, and the odds of success were reasonably high” (Ashton & Christophers, 2015: 295), expanding the motivations and perceived opportunities for misconduct (Needleman & Needleman, 1979).

This process of calculated positioning also entailed a simultaneous identification of relevant colluders and the *communication* to them of a manipulation opportunity and how this is to be realised. This overlaps with Scene 2 as the main activities consist of establishing the social network through which the crime could be committed and the identification of the key actors that could facilitate the crime commission. In some cases, an identification of a colluding party was not necessary since, as in the cases of Rabobank, Deutsche Bank and UBS, traders in cash or derivatives tied to the LIBOR or EURIBOR currencies were assigned also with the

role of submitters. The manipulation in this case consisted of the traders-submitters submitting an adjusted rate that benefited their own derivatives trading positions, and exemplifies the conflict of interests that was created within some of the banks. In these cases, identified in five of the penalised banks, the scripts involve only Scenes 1 and, partially, 3.

If the transactions depended on the movement of benchmark submission of the Trader's own bank, the identification remained in-house. In other cases, the calculation of the impact of LIBOR submissions of various panel banks meant that colluders were identified outside of the Trader's own bank. The process of identifying a colluding party also depended upon the particulars of the trading strategy – traders did not always need to enlist the help of all colluders across panel banks, only the ones whose predicted submission was not beneficial. This means that not all of the Panel Banks involved in the manipulation participated in all of the manipulative activities concerning a particular benchmark at all times during the manipulation period.

Scene 2: Recruitment

In the scenarios where traders needed to rely on another actor, the identification and enlisting of a colluding party involved various levels of difficulty, depending on organisational factors, the complexity of the scheme or the actor's own interests in the movement of the benchmarks. In some Panel Banks, organisational restructuring created unified trading desks that co-seated Traders and Submitters specifically with a view to actively encourage the sharing of information about currencies and markets. In RBS and Deutsche Bank where these mergers occurred, they were motivated by lucrative motives, but no consideration was given on whether this practice might induce compliance risks exemplifying how “greed” may create organisational structures amenable to rule violations (Slapper & Tombs, 1999; Fligstein & Roehrkasse 2016). Yet our data show that physical or indeed geographical proximity was not necessary for identifying colluding parties since in many manipulation instances, Traders based

across the globe recruited their Bank's Submitters located in London (e.g. Barclays, UBS). Further, as Table 2 and Scene 3 exemplify, the recruitment was global also in enlisting collaborators in different banks located across multiple jurisdictions.

The success of enlisting the participation of an actor also depended on whether there were any underlying conflicting interests relating to where the LIBOR fix should be set. The fact that some Submitters also had their own trading positions and that multiple traders within one bank requested adjustments meant that some requests were not accommodated. In cases of competing requests by Traders, in some Banks, the adjustment was made to benefit a "star" trader. For example, a U.S. dollar trader, nicknamed the Ambassador, took precedence over other requests at Rabobank, and other traders deferred to his position:

U.S. Dollar trader: IF THE AMBASS DOESN[']T HV ANY PREFERENCES, CAN I HAVE
LOW IS AND 3S THE NEXT FEW DAYS PLS MATEY ... CHEERS HOPE U R GOOD

U.S. Dollar trader-submitter: His exact word's are.. "i don't give a f*ck"...^v

Scene 2 is underpinned by a process of *communication*. As opportunities are communicated to potential co-manipulators, those who agree to conspire to fix the rate inherently become collaborators in the manipulation enterprise. This communication took many forms, such as email exchanges, instant messaging, phone calls and face-to-face conversations (sub-scene 1). In most cases, the communication was direct but in others some actors were implicated as they liaised between manipulators or spread the message to influence the LIBOR on behalf of the original requester. Thus, those involved may not have been aware of the full extent of the collusion (sub-scene 3).

Scene 3: (Ephemeral) Manipulation

This scene entails the actual transacting or doing (Hutchings and Holt, 2015) of the manipulative behaviour. In some cases, these transactions involved more ephemeral collaborations, with actors coming together to manipulate the rate more fleetingly. In other cases, these manipulations reflected more longstanding, repeated collaborations between networks of actors over time. In all cases, once the *transaction* by those agreeing to collaborate has occurred, the manipulation is realised, with corresponding outputs as discussed in Scene 4. The nature of the actual manipulation varies depending on the activities of the different actors, and is of different levels of complexity. Given the centrality of this scene to the manipulation, we have identified static sub-scenes that include the activities of conveying requests and making LIBOR submissions on the basis of the requests. In a greater level of complexity, an alternative sub-scene includes collusive behaviour involving several financial institutions, or involving pure market distortion types of activities.

Sub-scene 1: Conveying Requests

The requests for beneficial submissions were conveyed via range of informal and formal means, on occasion depending on the physical proximity of the colluder. Where traders and submitters sat closely together within the same organisational unit, the requests were often conveyed through in-person conversations. For example, at Deutsche Bank's derivatives trading desk, traders would on occasion shout out their preferred submissions. This simultaneously reveals the routine nature of the manipulation and frustrates the social control efforts of regulators as a significant number of these requests remained undocumented. In other cases, requests were conveyed via electronic messaging or through telephone conversations. The use of messaging platforms (e.g. Bloomberg and internal instant message chats) and emails to facilitate the offending was also paramount in cases where there was a spatial separation and differences in time zones between the actors involved.

The actors commonly used these platforms to convey adjustment requests without concealment or code words. In general, the coding of the conversations between the actors revealed that the actors talked openly about manipulating the LIBOR submissions. This provides insight into how organisational cultures can foster environments where definitions of behaviours differ to their perceptions by outsiders. What is more, as corporate employees are socialised into these environments and the frequency and intensity of interactions with deviant definitions increases, violations are more likely to be learned (Sutherland, 1983) and occur routinely. Thus, the level of self-censorship was strikingly low in these cultures. The lack of efforts around the concealment of the offences is unlike common scripts in most organised crimes where special measures are undertaken to conceal the offending and the criminal proceeds (Chiu et al., 2011). In this, the benchmark manipulations differ from other complex networked corporate crimes where extensive measures are undertaken to conceal the illegal activity. Both Geis (1967) and several decades later, Van de Bunt (2010), show how actors in conspiracies went out of their way to meet at secret locations and leave their agreements out of formal papered evidence. In this sense, the benchmark manipulation actors neither represented a secret society nor participated in particularly secretive activities.

Sub-scene 2: Submissions upon Requests

In response to the requests, different actors participated in the scheme through a range of methods, depending on their role. Submitters acted upon the Traders' requests and adjusted their submissions one or more basis points up (high-balling) or down (low-balling) to comply with the requests. The illegality in these actions concerns the fact that the submitted numbers were different to what would have been the real numbers, had the Traders' requests not been taken into account. For example, in response to a Trader, a Barclays US dollar LIBOR Submitter responded:

“For you...anything. I am going to go 78 and 92.5. It is difficult to go lower than that in threes, looking at where cash is trading. In fact, if you did not want a low one I would have gone 93 at least”.

In some cases, the Banks’ submissions were strikingly different from the previous day due to these accommodations and unusual vis-à-vis market conditions. These accommodations were routine in the corporate actors, and at times occurred almost on a daily basis. For example, at Barclays, when one Submitter on the desk was out, Traders knew to make their requests to others on the desk to ensure that their requests would be accommodated.

Sub-scene 3: Coordinated Submissions

This is a collective scene that involves multiple requests and submissions by several panel banks, acting collectively in concert to manipulate the rate. The involvement of banks in such behaviour significantly aggravated their penalties (Interview C, 2017), and this behaviour is similar to cartelling since cartels consist of illegal trade agreements between businesses (van Erp, 2016). For example, at Rabobank, on 19 March 2008, a Trader asked the Submitter to raise the bank’s six-month yen LIBOR submission from 1.02 to 1.10. The submitter complied and further reached out to a Submitter at another panel bank to request that he makes a similar 1.10 submission, with the hope that they could collectively move the published yen LIBOR rates for the day:

Rabobank Submitter: [Trader] needs a high 6m libor if u can help skip – asked me to set 1.10!

External Submitter: oops my 6s is 1.15!! [Trader will] love me.

Rabobank Submitter: hahaha so do i!

The Submitter at the other Panel Bank tried to convince the other Submitters to act upon Rabobank's request, explaining that: "We usually try and help each other out... but only if it suits... I think this will be OK for us anyway." Brokers performed a similar function and enlisted contacts at Panel Banks to pass on Traders' requests.

Commonly, Traders conveyed their requests directly to other Traders who then asked the Submitters for a specific submission along the lines identified above. On many occasions, the Submitters were unaware that the requests were coming from outside of the Bank and thought that they were benefiting their own Bank's trading positions. This confirms the levels of deference to the Traders' preferences. For example, at least 20 of the EURIBOR requests that Barclays' Traders passed on to their submitters were made by Traders at other Panel Banks. The Traders even blind-copied external traders into emails when contacting the Submitters to show them that they have made the requests. For example, on 6 September 2006, an external Trader sent an instant message to a Trader at Barclays requesting a low one-month submission: "I seriously need your help tomorrow on the 1mth fix". The next day, the Barclays Trader passed on the request to Barclays Submitters, blind-copying in the external Trader. These practices do not indicate concealment of the manipulation and avoiding social control from peers, however, since the mere requests and acting upon them completed the manipulation. The external favours may have been concealed to ensure cooperation by the Submitters and also, perhaps Traders wanted to keep these contacts and the ability to establish mutual favouritism for themselves.

Alternative Sub-scene: Market Distortion

Some of the manipulative activities did not involve the mechanics of requests and adjusted submissions, but wider market-based manipulative trading practices. Two such activities were identified in the scripts: "forcing LIBOR" and "spoofing", and both were aimed towards Submitters at other panel banks with the intention to create a false perception of the levels of

trading in a certain currency. As above, Panel Banks were meant to base their LIBOR submissions on the basis of levels of transactions in a particular currency in the cash markets. The “forcing LIBOR” and “spoofing” activities are therefore more akin to standard “pump and dump” frauds, where issuers artificially inflate the price of a certain (worthless) security (Tillman & Indergaard, 2005; Avgouleas, 2015). These also exemplify the complexity of the manipulation and the need to unpack more thoroughly the practices involved.

“Forcing LIBOR” schemes were undertaken by traders at Lloyds bank in the period September-December 2006 to influence upwards GBP LIBOR submissions of other panel banks and increase the overall GBP LIBOR rates. The Traders entered into certain derivatives contracts (Scene 1), and then bid aggressively in the cash market: “I have just told them my plan... I want to bid everything, so all LIBORs force up the one month.” To avoid being taken upon their bids by trading counterparties, the schemes were calculated to be undertaken during periods of market illiquidity: “you’ve got to do it when people can’t lend”.

To assist UBS Traders, Brokers at Martin Brokers engaged in “spoofing the market”, a market manipulation practice that consists of publishing false bids and offers so that false pricing information could be distributed to the market and other Panel Banks. Panel Banks, and their yen LIBOR Submitters, took these bids and offers into consideration when determining their own submissions:

UBS Yen Trader: “1m lib or is causing me a real headache... i need it to start coming lower”

Broker: “yeah i know mate ... ill try and push a few fictitious offers ard this mng see if tahts helps”

These market distortion activities were on occasion accompanied by the deliberate distribution

of false information on pricing and market trends through daily “run throughs” sent to Panel Banks by both of the Interbroker Dealers. These digests were commonly taken into account by Submitters to set their own LIBOR rate as they believed the Brokers participated in the execution of a wider range of transactions for a number of Panel Banks (DoJ, UBS), thus had expert insight into the volume of transactions.

Scene 4: Recompense and Solicitation

The final scene includes the provision of direct and indirect recompense (monetary and non-monetary) to those within and those outside of the instigator’s institution. Though this stage occurs after the commission of the manipulation, it ensures also the future participation of key actors. The indirect rewards consisted of enlisting the future assistance of the Trader/Submitter/Broker in the actor’s own scheme through establishing a system of returned favours. In terms of direct rewards, the coding of the decisions shows that a range of incentives were used to compensate the key actors. Some were aimed at particular individuals, for example, free travel, entertainment, meals, and payment of a set bonus as in the case of an ICAP derivatives Broker – a crucial individual in the facilitation of the Yen LIBOR manipulation. Rewards were also aimed at a more organisational level, where transactions benefited whole trading desks. This was done either through directing commission-generating business towards particular Brokers and trading desks within the Interbroker Dealers or through more opaque payment methods such as ‘wash trades’. This was the case with the compensation for the enlisting of Martin Brokers in the scheme of manipulating the Yen LIBOR by UBS: traders entered into two identical trades but with an opposing position, facilitated through Martin Brokers. These trades had no legitimate commercial rationale since they resulted in a net zero trading position but nonetheless generated commissions for the Martin Brokers Yen

desk. The various incentives were commonly promised in Scene 2, when recruiting participants, but were executed soon after, after a perceived success of the co-conspirator:

UBS Yen trader: “If you keep 6s unchanged today I will do fucking one humongous deal with you... Like a 50,000 buck deal whatever. I need you to keep it as low as possible. ...I’ll pay you, you know, 50,000 dollars, 100,000 dollars... whatever you want... I’m a man of my word.”

At this point, a process of *interpretation* of the outcome of the manipulations would take place. This interpretation involved an evaluation of the impacts of the manipulated benchmarks on corporate benefits and trading positions. However, providing those agreeing to collaborate behaved as requested, they would receive their benefit in turn, even if the desired outcomes were not obtained. For the traders, this would also subsequently inform re-calculations of positions and the identification of collaborators in Scene 1 with a view to future manipulations.

VI. Theorising the “capable guardian”: insufficient regulatory controls and “dual” corporate failures

Understanding the scripts of crimes entails an analytical concern with the *interactions* of ‘offenders’, victims and guardians in specific social contexts. In the case of the benchmark manipulations we do not have an immediately involved ‘victim’, unless we conceptualise the integrity of the financial markets as a value that can be ‘victimised’. Of course, there are many indirect, investor victims of the manipulation, including US cities and universities, some of which have filed and settled private antitrust litigation with the panel banks.^{vi} Capable guardians are defined as the actor or mechanism that can disrupt, either directly or indirectly, the ability of a motivated offender to engage with an opportunity for crime, in this case market

manipulation (Cornish, 1994a). In our view, the routine, widespread and commonplace activities in Scenes 1-4 were enabled through such a lack of capable guardianship at two levels: insufficient regulatory controls, and through the dual failures of the corporate actors.

The rate and commission of corporate crimes are closely connected to more macro-level ‘capable guardians’ such as the absence/presence of regulatory controls and (de)regulatory trends (Snider, 2000). The LIBOR manipulation is an apt example of how self-regulation can contribute to corporate crime commission. The process of setting the benchmarks was largely self-regulated, thus eliminating a public agency guardian in the first place. This made multiple regulatory agencies across jurisdictions oblivious to the improper communications across banks (“nobody saw LIBOR coming”, Interview B, 2013), and it also contributed to the development of internal corporate structures that facilitated the misconduct. Deregulation was accompanied by a growing complexity of financial products – a mix that has contributed to much misconduct in the financial markets (Tillman et al., 2018; Fligstein and Roehrkasse, 2016), as well as a growing concentration of Panel Banks as participants in the money markets, where derivatives contracts tied to particular benchmarks are traded. These processes, as well as the possibility of conflicts of interests between profitability on these markets and the neutral setting of LIBOR, were not recognised by regulators as market-wide factors and drivers towards offending. Unlike in the case of the pre-crisis widespread mortgage fraud, motivated by scarcity and competition for mortgages business (Fligstein and Roehrkasse, 2016), in the LIBOR rigging, the very essence of a concentrated market with a few (unsupervised) participants with preferential access to the money markets contributed to routinely abusing ready-made opportunities in an undetected manner. Traders at Barclays benefited from its position at the centre of highly consolidated money markets (Ashton & Christophers, 2015), while the manipulation of the Yen LIBOR by UBS was accompanied by the fact that UBS largely created the market in Yen LIBOR-based derivatives contracts. UBS

acquired significant positions in Yen LIBOR-based derivatives contracts in a previously illiquid (non-trading) market thus, achieving preferential Yen LIBOR fixes was highly lucrative and opportunistic. Criminological scholarship has shown that concentrated industries aid to offending by creating motivation and opportunities to offend (Leonard & Weber, 1970: 438). This remained largely unnoticed by regulators across the globe, despite the fact that industry insiders alerted them to manipulations as early as 2007 (Hou & Skeie, 2014). This emphasises the role of government regulation in shaping criminogenic industry structures and opportunities (Bradshaw, 2015), an issue neglected in standard scripting and routine activities approaches.

The control of corporate crime is especially compounded by the fact that in modern regulatory regimes, companies are tasked with the role of overseeing individuals within them (as in, e.g. meta-regulatory regimes, Parker, 2002), while at the same time also appearing as offenders themselves. This, perhaps irreconcilable, duality of the corporate role is particularly evidenced in the benchmark manipulation scandals that were facilitated by dual corporate failures. Those formally tasked to act as capable guardians (e.g. managers, compliance officers) failed in their oversight and were also, in many cases, facilitators or executors of the manipulations – there was a dual role for these actors.

The routine nature of the activities was fostered by poor organisational guardianship: lack of policies and training on how to set the benchmarks, organisational structures that promoted improper behaviour, poor oversight of traders' and brokers' activities and poor reporting lines on their misconduct. Until the banks came under investigation, they did not have specific internal policies, controls or procedures governing the benchmark submissions process to ensure that the submissions did not take into account impermissible factors such as the derivatives positions. Further, in many of the institutions, there was a lack of internal "Chinese Walls" between different parts of the banks responsible for the setting and the trading upon the

benchmarks, which exacerbated an inherent conflict of interests. The concept of “Chinese Walls” is frequently used in the context of protections against conflict of interests within a single organisation that deals with investments and confidential information. This obstacle represented a specific regulatory requirement in the prevention of insider dealing (e.g. Chapter 10 of the FCA Handbook). It is adequate to use here this concept to designate the problems of oversight and situational crime prevention in the rigging offences. This was especially the case in the institutions where the roles of Trader and Submitter were vested in the same person, or where Traders and Submitters were sat together and encouraged to exchange information on the currencies. Inevitably, this led to the development of a single occupational culture – in which considerations of corporate profitability prevailed over the self-regulatory requirements of honestly setting the interest rates. The common organisational ethos was evidenced, for example, at Rabobank and RBS, where the Yen LIBOR Submitters either actively adjusted the LIBOR rates to benefit their organisation’s positions (according to what they believed) or solicited requests from the Traders, saying such things as, they would “input whatever you want”. These organisational structures and cultures enable relatively easy processes of identification and recruitment of collaborators (Scenes 1 and 2) and execution of the manipulative activities (Scene 3). Scene 4 was further facilitated by the lack of proper oversight over the process of rewards: the ‘wash trades’ were not identified by managers at the Panel Banks and the Interbroker Dealers (see the Final Notice against David Caplin, Compliance Officer at Martin Brokers).

The special circumstances of scripting corporate crime pose challenges as to how to accommodate for the role of individuals in positions of oversight but who facilitate the crime commission (an actor in the network or an incapable guardian?). In all of the offending institutions the activities of the Traders and Submitters across the scenes were known to managers at their trading desks. They allowed for the misconduct to occur unchallenged. In the

case of the UBS Yen LIBOR rigging, the activities of a senior Yen trader were known to managers across jurisdictions (Tokyo and Zurich), and to senior managers above the desk-level managers:

“The UBS managers allowed the trader to engage in this conduct, which ended only when he decided to leave UBS over a pay dispute. No one involved in or aware of the misconduct reported it as wrongful to more senior management, or to UBS’s compliance or legal departments.”

This means that though these actors did not engage in active manipulation themselves, they enabled it through poor guardianship.

Finally, in many of the banks, managers were also involved in the manipulative requests, or submissions, displaying a complete breakdown of a capable guardian, and emphasising the duality of the corporate failures. For example, the FCA enforcement decision against Lloyds records the following exchange between a manager and a trader in discussing a request for a lower GBP LIBOR:

Trader: “every little helps ... It’s like Tesco’s”

Manager: “Absolutely, every little helps.”

The mutually reinforcing interaction between these factors may have added to the sense of ‘invincibility’ and lack of almost any concealment as per Scene 3. Across the scripts, actors took almost no precautions to conceal their activities. The requests were openly discussed on (relatively public) chats, and through non-coded emails. In comparison to extant research on organised crime (Chiu et al., 2011), throughout significant periods, the preparation activities did not include any element of learning about and taking steps towards anonymity and security.

The only preparation action towards this was identified as late as 2010, when there were signs of internal investigations within banks to detect problems with the LIBOR submissions. In the case of RBS, such steps were masking the email correspondence to assert that the Submitter would not act upon the trader's request, to then still fulfil the request in an un-coded phone conversation. The actors believed that these were not recorded. The lack of concealment and the extent of the routine adjustment requests may also explain why the conversations first appear as only 'banter' (Interview D, 2014).

VII. Conclusion: The Paradoxical "Guardian"

This study provides an analysis of the 'scripts' found in complex corporate crime – previously unexamined in this context – through a case study of financial benchmarks manipulation. We imported concepts from theories of routine activities (i.e. guardianship, structural patterns of routine behaviours in business) and adapted the script analysis approach (i.e. analysing the mechanics of benchmark manipulation) to the specificities of the corporate offending in two important ways: first, we established both the organisation, and individuals within it, as separate actors in the offending network; second, we theorised the 'capable guardian' with reference to the social control systems relevant for corporate offending.

The scripts approach enabled a deconstruction of the procedural aspects of the crime commission, revealing how the manipulative activities were routine, often embedded in regular aspects of the actors' jobs and in everyday conversations across multiple jurisdictions, and, importantly, how actors went through the scenes without much consideration for concealing their activities (e.g. recruitment of co-manipulators, conveying requests, submissions upon requests). These micro-level insights enable a more nuanced analysis of the role of the 'capable guardian' in complex corporate crimes. It is our contention that by better understanding the

mechanics of benchmark manipulation, we have been able to establish that the purported ‘capable guardians’ at the organisational level, that is, the regulatory agencies and the banks, also played a paradoxical role of facilitators of the misconduct. At the governmental level this was facilitated through reliance on self-regulation and the lack of understanding of the growing concentration of the market and the inherent conflicts this created in the panel banks. At the bank-level, the corporate role was crucial in establishing a culture amenable to misconduct, both because of poor guardianship and because of creating incentives to manipulate (e.g. the duality of roles) and supporting the trading strategies of the key individuals. Finally, our analysis also revealed that certain corporate players embedded as core actors in regulatory regimes in positions of oversight, such as managers, performed a paradoxical role of both ‘controller’ and ‘criminal’; these corporate players should be considered as both actors in the network and incapable guardians.

By integrating the deconstructed, individual-level ‘scenes’ of manipulation with recognition of the dual corporate failures and insufficient regulatory systems at the organisational and socio-political levels respectively, we have made an innovative contribution, both substantively and methodologically, to understanding complex corporate financial crimes. This is an analytical approach that can be extended to other analogous corporate misconduct since the role of the corporation as an organisational actor in the scripts of corporate crime commission remains under-theorised and requires further empirical attention.

Bibliography

Ashton P and Christophers B (2015) On arbitration, arbitrage and arbitrariness in financial markets and their governance: unpacking LIBOR and the LIBOR scandal. *Economy and Society* 44(2): 188-217.

Avgouleas E (2015) *The Mechanics and Regulation of Market Abuse*, Oxford: OUP.

Baldwin R, Lodge M and Cave M (2012) *Understanding Regulation*, Oxford: OUP.

Bradshaw E (2015) “Obviously, we’re all oil industry”: The criminogenic structure of the offshore oil industry, *Theoretical Criminology*. 19(3): 376-395.

Braithwaite, J (1984) *Corporate Crime in the Pharmaceuticals Industry*. Routledge: London.

Brayley H, Cockbain E and Laycock G (2011) The value of crime scripting: Deconstructing internal child sex trafficking. *Policing*, 132-143.

Chiu Y-N, Leclerc B and Townsley M (2011) Crime script analysis of drug manufacturing in clandestine laboratories: Implications for strategic intervention. *British journal of criminology*, 51:355-74.

Clarke M (1990) *Business Crime. Its Nature and Control*, Oxford: Polity Press.

Cohen LE and Felson M (1979) ‘Social change and crime rate trends: A routine activity approach’, *American Sociological Review*, 44: 588–608

Coleman JW (1987) Toward an Integrated Theory of White-Collar Crime. *American Journal of Sociology*, 93(2): 406–39.

Cornish DB (1994a) Crimes as scripts. In: *Proceedings of the International Seminar on Environmental Criminology and Crime Analysis*. Tallahassee.

Cornish DB (1994b) The procedural analysis of offending and its relevance for situational prevention. In: Clarke RV (ed.), *Crime Prevention Studies*. Monsey: Criminal Justice Press, 151–96.

Edwards AM and Levi M (2008) Researching the Organization of Serious Crimes. *Criminology and Criminal Justice* 8(4): 363-388.

Felson M and Eckert MA (2018) *Crime and Everyday Life: A Brief Introduction*, London: Sage.

Fligstein N and Roehrkasse A (2016) The Causes of Fraud in the Financial Crisis of 2007 to 2009, *American Sociological Review*, 81(4):617-643.

Geis G (1967) White Collar Crime: The Heavy Electrical Equipment Antitrust Case of 1961. Pp. 139-50 in *Criminal Behavior Systems: A Typology*, edited by M. Clinard and R. Quinney. New York: Holt, Rinehart & Winston.

Hall C (2013) Anything for You Big Boy: A Comparative Analysis of Banking Regulation in the United States and the United Kingdom in the Light of the LIBOR scandal, *Northwestern Journal of International Law & Business*, 34:153.

Hancock G and Laycock G (2010) Organised crime and crime scripts: prospects for disruption. In K Bullock, RV Clarke & N Tilley (Eds.), *Situational prevention of organised crimes*. Cullompton, UK: Willan.

Hou D and Skeie D (2014) LIBOR: Origins, Economics, Crisis, Scandal, and Reform, Federal Reserve Bank of New York, Staff Report No.667.

Hutchings A, and Holt TJ (2015) A Crime Script Analysis of the Online Stolen Data Market, *The British Journal of Criminology*, 55(3)1: 596–614.

Knorr Cetina K and Bruegger U (2002) Global Microstructures: The Virtual Societies of Financial Markets. *American Journal of Sociology*, 107(4):905–950

Koblenz M, Labbate KM and Turner CC (2013) LIBOR: Everything You Ever Wanted to Know But Were Afraid to Ask, *Journal of Business, Entrepreneurship & the Law*, 6:281.

Leclerc B, Wortley R and Smallbone S (2011) Getting into the script of adult child sex offenders and mapping out situational preventive measures, *Journal of Research in Crime and Delinquency*, 48/2:209-237.

Leonard, WN and Weber MG (1970) Automakers and Dealers: a Study of Criminogenic Market Forces, *Law and Society Review*, 4:407-424.

MacKenzie D (2008) What's in a number? *London Review of Books*.
<http://www.lrb.co.uk/v30/n18/donald-mackenzie/whats-in-a-number>.

Morselli C and Roy J (2008) Brokerage Qualifications in Ringing Operations, *Criminology*, 46:71–98.

Needleman M and Needleman C (1979) Organizational Crime: Two Models of Criminogenesis. *Sociological Quarterly* 20(4):517–28.

Shapiro SP (1990) Collaring the Crime, Not the Criminal: Reconsidering “White-Collar Crime”, *American Sociological Review*, 55: 346–365.

Slapper G and Tombs S (1999) *Corporate Crime*. London: Longman.

Snider L (2000) The Sociology of Corporate Crime: An Obituary: (Or: Whose Knowledge Claims have Legs?). *Theoretical Criminology* 4(2):169-206.

Sutherland E (1983) *White-Collar Crime*, New Haven: Yale University Press.

Tillman RH and Indergaard M (2005) *Pump and Dump: The Rancid Rules of the New Economy*. Piscataway, NJ: Rutgers University Press.

Tillman RH., Pontell HN and Black WK (2018) *Financial Crime and Crises in the Era of False Profits*. Oxford: OUP.

Van de Bunt H (2010) Walls of secrecy and silence: The Madoff case and cartels in the construction industry. *Criminology & Public Policy* 9(3): 435–453.

Vaughan D (1998) Rational Choice, Situated Action, and the Social Control of Organizations, *Law & Society Review*, 32(1): 23-61.

Van Erp J (2017) Anti-cartel Thrillers as a New Film Genre: How Regulator-produced Films Portray and Problematize Cartels and Communicate Deterrence, *Crime, Media, Culture*, 1-18.

Wheatley M (2012) *The Wheatley Review of LIBOR: Final Report*. London: HM Treasury.

Zanella M (2013) ‘Script Analysis of Corruption in Public Procurement’ in: B. Leclerc, R. Wortley (eds.) *Cognition and Crime: Offender Decision Making and Script Analyses*, London: Routledge.

ⁱ Our analysis focuses mostly on LIBOR but enforcement investigations since 2010 have provided insight into the manipulation of other benchmarks such as EURIBOR and TIBOR, and the analysis here draws upon insights from the EURIBOR manipulation.

ⁱⁱ Such as child sex trafficking (Brayley et al. 2011), robbery (Cornish 1994a), drug manufacturing (Chiu et al. 2011), corruption in public procurement (Zanella, 2013) and the online black-market economy (Hutchins & Holt, 2014). The method has also been used to script the participants or the crime ‘actors’, specifically organised crime offenders (Hancock & Laycock 2010), and sex offenders (Leclerc et al. 2011).

ⁱⁱⁱ Includes a fine by the NYDFS.

^{iv} Supplementary information was collected from the Swiss Competition Commission (COMCO) fines against Barclays, Citigroup, Deutsche Bank, JPMorgan, RBS and Société Générale in 2016. Due to insufficient data on its compliance procedures, JPMorgan was excluded from the ‘capable guardian’ analysis.

^v The excerpts are presented in their original so they are commonly filled with grammar and punctuation errors that have not been corrected for the purposes of this paper.